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SPERMATORRHŒA:

ITS CAUSES, SYMPTOMATOLOGY, PATHOLOGY,
PROGNOSIS, DIAGNOSIS, AND
TREATMENT.

BY

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PREFACE.

A SHORT essay on the Pathology and Treatment of Spermatorrhœa, based upon a clinical lecture delivered at St. John's Hospital, and published in the *Cincinnati Journal of Medicine*, having met with a very favorable reception from the profession, it has seemed desirable to give the subject fuller treatment from the same point of view.

There have been but few special treatises on this disease of a reputable character. The work of Lallemand, *Des pertes séminales involontaires*, Paris et Montpellier, 1837-41, is the source from which subsequent writers have drawn their information. A portion of this work has been presented in an English dress by two translators—Wood and McDougall. Additions to the translation of the last named have been made by Maris Wilson, and in this form it is the principal authority now in the hands of American physicians. The subject is also discussed, necessarily in an incomplete manner, in various works on the practice of medicine and surgery. Besides these authorities, Mr. Acton has lately addressed the general public in a work on the

reproductive organs, in which he discourses more or less fully on Spermatorrhœa.

I think it is a reproach to our profession that this subject has been permitted, in a measure by our own indifference, to pass into the hands of the unscrupulous pretenders, whose suggestive publications are amongst the crying evils of our time. Because the subject is disagreeable, and to a certain degree disreputable, competent physicians are loth to be concerned with it. The same unnecessary fastidiousness causes the treatment of this malady to be avoided in private practice; and the unfortunate patients, thus precluded from obtaining intelligent advice, fall into the hands of advertising specialists, who excite their worst apprehensions for a mercenary purpose. For this reason, and to obviate the sad consequences which result from spermatorrhœa, it is our duty to exert our best efforts in behalf of those afflicted with this malady. We should endeavor to attain to correct views of its pathology, and apply our knowledge to its cure—if for no other reason, for the good of our species.

My little work will have done all that I can desire for it, if it assist the practitioner in forming correct views of the nature of spermatorrhœa, and enable him to conduct cases of this disease to a more successful issue than he has hitherto been able to accomplish.

R. B.

SPERMATORRHŒA :

ITS CAUSES, SYMPTOMATOLOGY, PATHOLOGY, PROGNOSIS, DIAGNOSIS, AND TREATMENT.

I.

CAUSES.

ETYMOLOGICALLY, and in its technical sense, the term spermatorrhœa is applied to the flow of semen without copulation; in other words, to involuntary seminal losses. But all involuntary seminal losses are not necessarily pathological. The term should, therefore, be restricted to that condition in which involuntary losses occur with sufficient frequency to produce a well-defined morbid state.

Of all the causes of spermatorrhœa, masturbation is incomparably the chief. Almost all truthful patients refer the origin of their seminal troubles to this vice. We do not propose to offend the sensibilities of our readers by a detailed description of onanism; but it is necessary to the

faithful elucidation of our subject, to enter with some particularity into the physiological conditions under which this vice is contracted.*

To the predominance in activity of the nervous, over the other systems of the organism, is the practice of masturbation chiefly to be attributed. This dreadful habit is not frequently acquired by vigorous subjects in whom the muscular and gastric apparatus are well developed—for in them, exercise and the satisfaction of the appetite sufficiently employ the imagination. Nervous, not fully developed, and excitable boys, at the age of puberty, are those who become a prey to this habit. The development of the organs at this period of life, and the accumulation of semen in the vesiculæ seminales, produce a marked impression upon the central nervous system; and the imaginative faculty, already morbidly excitable,

* The reader who desires to pursue this subject, will find full information in a well-considered article by Fournier and Begin in the *Dictionnaire des Sciences Médicales*, Vol. 31, pp. 100–134, from which some of the views in this section have been obtained. The authors drew much of their information from Tissot's work: *L'Onanisme. Dissertation sur les Maladies produites par la Masturbation.*

riots in lascivious images. An accidental friction of the erect organ in these moments of delirium, makes the unfortunate youth acquainted with a new and voluptuous sensation. Ignorant of the dreadful consequences which must ensue from the repeated perpetration of this act, the youth perseveres in his secret pleasures until arrested by realizing some of the sad effects upon the mind and body which follow. Such is the usual history of these cases. In other instances, the development of the nervous system not being in excess of the development of the other systems, the sexual desires may be morbidly excited and the imagination aroused by voluptuous pictures and suggestive books and novels.

The vice may also be due to an unnatural, early development of the genital organs. Mr. South relates* an extraordinary case of premature puberty. "When he was about four months old, the hair on the pubes began to grow very quickly and black, at which time the penis increased in size, particularly the glans, so that it gradually extended beyond the prepuce, till about fifteen

* Medico-Chirurgical Transactions, Vol. XII. p. 76.

months, when it was entirely exposed; the pubes were then completely covered with black, curling hair. * * * * Soon after this, she (his mother) noticed that his linen was stained two or three times in the week. * * * * She also states that since he has been in town (six weeks) the emissions have been more frequent than for some time previously." Mr. South gives the following measurements of the penis of this extraordinary infant: length of penis when pendent from the symphysis pubis, three inches; length of penis when erect, six inches. This is probably the most "rare and curious" case of premature puberty on record; certainly it is the earliest period at which spermatorrhœa has occurred. Such an instance is wholly exceptional. Nevertheless, a premature development of the sexual organs may constitute an occasional cause of self-pollution—the more especially if such development be not accompanied by corresponding growth of the other organs and systems of the body, and of the reason and moral control. The organic peculiarity, next to those already described, which chiefly disposes to masturbation, is phymosis, or an unnaturally elongated prepuce. The retention of the sebace-

ous secretion of that locality gives rise to considerable itching, to allay which, the hand is directed to the part.

Sometimes the habit is due to training. Boys in public schools, or in other public institutions, where numbers of them are congregated together, acquire knowledge of this vice, and are led to its perpetration by the influence and example of older boys. With regard to this, however, the view of Quintilian is probably the more correct one: *non accipiunt e scholis mala ista, sed in scholas afferunt*. They take into the school those organic deficiencies or tendencies, the predisposing causes of masturbation. The sedentary life of the school or the shop favors the action of these causes. Dr. Simon* (*de Metz*) attributes great influence to all those circumstances which increase the quantity of blood in the genital organs at the epoch of puberty, amongst which he enumerates prolonged sitting, as at school, which fatigues the spinal column and causes an accumulation of the blood in the inferior parts of the trunk. "For the same reason," says Simon, "that clerks and persons

* *Traité d'Hygiène appliquée à l'Education de la Jeunesse*. Paris, 1827, p. 164.

who ride much on horseback or in carriages, are exposed to hemorrhoids, boys will experience excitement of the genitals in consequence of engorgement of the testes and spermatic cord." These causes can only be considered as exciting. The true origin of the habit of masturbation is to be found in those inherent peculiarities of the mental and physical constitution to which we have referred it.

Under what circumstances soever the vice may be contracted, it is usually continued until weakness of the genital organs and more or less derangement of the other functions are produced. The habit is discontinued, either because of some evident ill consequence which alarms the patient, or he is informed of the inevitable result which must ensue from his violation of a natural law. But the unfortunate victim finds that the cessation or diminution of the habit does not restore him to his natural state. He is soon after alarmed by the occurrence of nocturnal emissions in a lascivious dream, or of diurnal emissions under slight excitement.

Excess in natural coitus, as well as masturbation, but by no means so frequently, will produce the same morbid state.

Lallemand* thinks that inflammation of the prostatic portion of the urethra, ulcerations of the orifices of the seminal ducts, and diseases of the prostate gland, are the principal causes. He also ascribes considerable influence to ascarides in the rectum, hemorrhoids, and fissures of the anus. When we come to study the pathology of spermatorrhœa, we shall subject the views of M. Lallemand to careful examination, and offer some reasons for doubting their correctness.

Certain diseases of the brain and spinal cord are manifested among other symptoms by seminal losses. Thus, spermatorrhœa is one of the most common symptoms of the *ataxie locomotrice progressive* of Duchenne.

Lebert† enumerates amongst the causes, chronic alcoholismus, non-descent of the testes (occasionally), long continence (rarely), obliteration of the vasa deferentia, disease of the prostate and urethra, and continued mental overwork (possibly).

* *Des Pertes Séminales Involontaires*. Paris et Montpellier, 1837-41. 3 vols.

† *Handbuch der Praktischen Medicin*, von Dr. Hermann Lebert, Prof. der Medicin Klinik und der speciellen Pathologie und Therapie in Breslau. Tübingen, 1863. Vol. II., p. 765.

The physiological origin of spermatorrhœa must not be overlooked. Adults in full health have emissions, when continent, more or less frequently, according to their sexual peculiarities. This spontaneous evacuation is an effort of nature, under these circumstances, to supply the lack of use of a physiological function.

That such occasional loss is physiological rather than pathological, seems confirmed by the good effects which ensue from it upon the mental and physical constitution of the individual. The inquietude of mind, the headache, and the habitude of body which are experienced anterior to the evacuation, become relieved thereby; the muscular movements are then more easily executed; the headache ceases, and the mental operations are more rapid and clear. In some subjects, however, these evacuations may become so frequent and excessive as to constitute a pathological state. This occurs in clergymen, in studious persons of sedentary habits, and in those whose nervous apparatus has been deranged by dyspepsia. The excessive use of such stimulants as coffee and tobacco by continent persons who have weak digestion and slight muscular development, and a

preponderating nervous system, powerfully contributes to the conversion of a physiological into a pathological spermatorrhœa.

In the study of individual cases, it is necessary to distinguish one class of agencies from another. Prognosis and therapeutics are both influenced by the character of the cause.

II.

SYMPTOMATOLOGY.

THE signs and symptoms of spermatorrhœa may be divided into the *objective* and *subjective*: the objective being those which are recognised by the physicians; the subjective, those of which the patient himself only is conscious. It is not always possible to separate the symptoms due to masturbation from those of spermatorrhœa. There is a practical utility in placing them side by side for the purpose of comparison. The two conditions are so frequently united, and the connexion between them of cause and effect so intimate, that the symptoms of both may be comprehended in the experience of the same individual. It is remarked that the voluntary seminal losses by unnatural means are much more active in producing the various secondary phenomena of this disorder, than the involuntary. The former are manifested, also, by more positive objective signs.

OBJECTIVE SYMPTOMS DUE TO MASTURBATION.

—Objectively considered, the masturbator is recognised by a marked facial expression, by a characteristic mannerism, and by a peculiar mental state.

The facial expression consists of a pale and sallow tint of the skin; unusual development of acne, especially on the forehead; a dark circle around the orbits; dilated and sluggish pupils; lustreless eyes, and an oblique line extending from the inner angle of the lids transversely across the cheek to the lower margin of the malar bone. The face has a haggard, troubled, furtive expression. These signs of themselves are by no means conclusive, for they may be produced by other causes than masturbation. This observation is especially true with respect to acne. This eruption occurs at puberty, more or less abundantly in different temperaments; and hence it would be very unjust to accuse young men of practising onanism, in whom no other evidence of the fact existed than the presence of this eruption.

The manner of the masturbator is peculiar. He is listless, shy, retiring, and easily confused; he avoids society, preferring solitude; there is a want

of steadiness and decision in his locomotion; his inferior extremities seem deficient in power, and all his movements betray a mind ill at ease.

His mental operations are confused; his speech is embarrassed, awkward, and without directness; his memory is defective, and he is absent-minded and given to reverie. If the habit have long existed, and been excessively frequent in repetition, epilepsy may be produced; or serious mental disorder, as delusional insanity, dementia, etc., may occur.

The state of the genital organs varies with the length of time the habit has been indulged. In some young subjects, there will be observed an extraordinary development of the organs, owing to premature excitement; but the disproportion is not maintained. With the progress of the habit the penis becomes relaxed, the erections feeble; the corpora cavernosa either atrophy or their vessels lose their tonicity, whereby an apparent diminution in bulk takes place; the corpus spongiosum and the glans also shrink, so that the prepuce appears unnaturally elongated. The testes may increase in size, become tender and "irritable," or they may undergo a certain degree of atrophy;

the latter is the more usual result. In addition to these signs, a strong and sometimes overpowering spermatic odor is observed about these parts, and may diffuse itself in the atmosphere around the patient.

SUBJECTIVE SYMPTOMS DUE TO MASTURBATION.

—Pains in the lumbar region, a sense of weight and aching in the loins, around the arms, and in the testes, are experienced. The appetite is capricious, the digestion feeble, and the bowels are constipated, or constipation alternates with diarrhœa.

The mind is deficient in power of attention; the imagination is constantly pervaded with vague erotic dreams, the moral sense is blunted, and the perceptions are dull and confused. Pains in the head, in the occipital and frontal regions, and a sense of fulness, and in serious cases alarming vertigo; pains in the course of the principal nerves, and an extreme nervous susceptibility, are experienced. The organic nervous system manifests a functional disturbance in harmony with the disorder of the nervous system of animal life. Gastralgia and abdominal pain and uneasiness are in some cases very distressing symptoms.

The distinctiveness of the foregoing symptoms will be determined by the extent and duration of the habit, and by the constitutional peculiarities of the patient. The more highly developed the nervous system, and the more it preponderates in activity over the muscular and digestive systems, the more serious the effects.

OBJECTIVE SYMPTOMS OF SPERMATORRHŒA.—These are in many respects similar to those due to masturbation. The same cause, indeed, is in operation, but is much less powerful.

The facial expression is not so marked. Acne is not common. The discoloration of the eyelids is decided, only in cases of very frequent seminal loss. The face is usually pale, sallow and thin, anxious or sad in advanced cases. The manner is more or less retiring, subdued, and melancholy. Effeminacy, and sometimes extreme pusillanimity, are observed. Society is distasteful, or is absolutely avoided. Memory and power of attention are defective, and the patient is subject to fits of depression and melancholy, and is absorbed in the contemplation of his infirmity. These mental effects are frequently greatly dispro-

portioned to the real importance of the malady ; they are increased by popular works on this subject, for the perusal of which these patients have a prodigious *penchant*. They imagine themselves possessed of every infirmity portrayed in these works, and are not unfrequently driven to the verge of insanity by their apprehensions. Hypochondria is a very constant mental symptom ; but true mental alienation is not, by any means, so frequently observed as in masturbation.

The genital organs are relaxed, the scrotum pendent, the veins of the spermatic cord varicose, the erections deficient in power and duration, and the seminal fluid is thin, watery ; the spermatozoa are deficient in size and activity, and are imperfect in development. The urine is pale, of low specific gravity, and loaded with urates. An evident feebleness of the general system exists, manifested by a quick, weak pulse, cold hands and feet, hurried respiration, and loss of flesh and muscular vigor.

SUBJECTIVE SYMPTOMS OF SPERMATORRHŒA.

—Weakness in the back and pain extending upwards to the scapula ; pain along the spermatic

cord, in the hips, around the anus, and pain in micturition, are experienced by the patient. He has a variable appetite and suffers from dyspepsia, borborygmi, constipation, and diarrhœa. He complains of weakness in the knees, with pain and soreness of the calves, and loss of power in the inferior extremities. His sensations in these parts may be perverted. He has also headache, or a sense of fulness in the head; he can fix his mind on any subject with difficulty; his attention wanders, and he is given to day-dreams and to erotic visions.

The importance of the foregoing symptoms will be governed by the frequency of the spermal losses. They are felt in the greatest intensity on the morning succeeding the nocturnal emissions.

The essential symptom in spermatorrhœa is the occurrence of seminal losses. Lallemand, and succeeding writers following him, divide these into *nocturnal* and *diurnal* pollutions. The nocturnal occur at night in an erotic dream, with a more or less decided venereal orgasm; and their importance, in a pathological point of view, will be wholly determined by the frequency of

their occurrence, and the evident derangements of the organism which precede or accompany them.

The diurnal pollutions, according to Lallemand, occur principally in micturition and defecation; passively in some subjects, owing to a superabundance of semen in the vesiculæ seminales; in others with a certain pleasure and a definite ejaculation; and in others, habitually, without sensation, with a feeble or scarcely perceptible ejaculatory effort. The first variety can hardly be regarded as pathological.

We regard it as peculiarly unfortunate that these views of M. Lallemand, with reference to diurnal pollutions, have obtained such general credence. The minds of patients become so impressed with the conviction that every mucous flow from the urethra is seminal, that it is difficult to overcome it. They parade this symptom and dwell upon it, believing that it has the pathological significance which Lallemand and his followers have ascribed to it.

The last symptom in this connexion to which we shall refer is *impotence*. This may be relative or absolute. The first is characterized by desire,

with inability to accomplish the sexual congress, and the second by both absence of desire and by inability.

III.

PATHOLOGY.

VERY diverse views have obtained as to the pathology of spermatorrhœa. By surgeons it is regarded as an affection—an inflammation or an irritation—of a part of the genito-urinary apparatus, and the surgical treatment is based upon this pathological doctrine. One of the most recent and able of surgical authorities,* treats of it under the heading of “functional disorders of the testicle.” The modern surgical writers in general adopt this view, especially those accessible to the American reader.† The work of Lallemand‡ is

* Holmes's System of Surgery—Art., Diseases of the Male Organs. Vol. IV., p. 539. London: 1864.

† Gross's System of Surgery, p. 831-2, Vol. II. Phila.: 1865. Erichsen's Surgery, p. 1224. A Practical Treatise on the Disease of the Testis, etc., by Curling. Phila. Ed., p. 326, *et seq.*, etc., etc., etc.

‡ *Des Pertes Séminalles Involontaires*, op. cit. Also, *Observations sur les Maladies des Organes Génito-Urinaires. Première Partie*, p. 158 *et seq.*, 1825, by the same author. The influence of a

the principal source of these pathological views. It will be proper, therefore, to present an outline of this author's doctrines, before presenting our own.

Views of M. Lallemand.—This observer regards the following as playing an important rôle in the production of this disorder: *Blenorrhagia* and stricture of the urethra, the former affecting the prostatic part of the urethra and the orifices of the seminal ducts, and the latter producing dilatation of the ducts by the efforts of micturition: *gouty* and *rheumatic* affections occurring in these parts; accumulation of *sebaceous* matter under the prepuce constituting a source of irritation; *venereal* excesses and *masturbation*, which act, principally, by provoking inflammation or irritation of the ducts; prolonged erections excited by *erotic* ideas or *lascivious* publications; the use of *diuretics*, of *ergot*, of *cantharides*, etc.; the abuse of *alcoholic* drinks, of *coffee* and of *tea*; *constipation*; *ascarides* in the rectum; *hemorrhoids*; *fissures* of the anus; *heating* and *irritation* of the anal and peri-

"hobby" is well seen in the growth of M. Lallemand's opinions and practices during the fifteen years' interval between these works.

neal regions by habitual sitting, or prolonged horseback riding.

The organic peculiarities which predispose to spermatorrhœa are, according to this author—excessive length of the prepuce; hypospadias; extraordinary size of the meatus urethræ; flaccidity of the corpora cavernosa; smallness, tardy descent, and lack of firmness of the testes; relaxation of the cord and of the scrotum; varicocele; congenital induration of the prostate, and great development of the pelvis with feminine characters.

When the nocturnal pollutions are due to excesses, to abuse, to the presence of ascarides in the rectum, they produce, according to Lallemand, grave disorders in a short time after their appearance. After a little, all the phenomena of excitation which precede or accompany the orgasm diminish, and finally completely disappear; the act of emission occurring without erection, pleasure, or any particular sensation. The semen loses little by little its color, its odor, and its spermatozoa, and comes to resemble more and more, either mucus or the prostatic fluid. This progressive diminution in the excitation of the

genital organs, and this increasing alteration in the sperm, correspond with a remarkable augmentation in the gravity of the general symptoms and in the difficulties in the treatment. At the same time the vesiculæ seminales acquire the power of contracting under the influence of a less energetic excitement. Then, also, fulness of the bladder or rectum, a warm, soft bed, lying on the back, warm drinks, excitants, etc., provoke emissions more or less easily. The effects are much more serious when to the nocturnal are added diurnal pollutions. Some patients suffer only from nocturnal pollutions, but such cases are rare.

The diurnal pollutions, according to Lallemand, are produced by all those causes which increase constipation and favor the excitation of the genital organs; such as prolonged sitting, the jolting of a carriage, riding on horseback, etc. In some subjects the pollution does not take place passively during the efforts of defecation, and by the simple effects of compression, but by the proper action of the ejaculatory apparatus. These cases are unusual. In all the others the semen is emitted without the sensible phenomena of ejaculation. The evil effects are determined by the abundance

of the loss; but some persons support the losses better than others.

The varieties of nocturnal and diurnal pollutions manifest themselves successively or simultaneously. The specific character is the sudden expulsion of semen in notable quantities at variable intervals. A symptom which has close relation to spermatorrhœa, and which ordinarily accompanies it, is impotence. In all cases of nocturnal or diurnal pollutions, the first symptom discovered is a notable diminution in the energy and duration of the erections, and an increased readiness of ejaculation.

M. Lallemand gives the following result of his microscopic examinations of the excreted matters in the different varieties of seminal loss: "When the evacuations are rare and the semen has preserved its distinctive characters, the animalcules present nothing remarkable either in respect to numbers or dimensions. But when the spermatorrhœa has assumed sufficient importance to influence the rest of the economy, the semen becomes more liquid, and the animalcules are less developed and less vivacious, although their number may not appear to be diminished. When

the erections commence to diminish, the semen is more aqueous; the dimensions of the spermatozoa are sometimes one-fourth or one-third their normal size, their caudal prolongation being distinguishable with difficulty, with a power of 300 diameters.”*

The central idea of M. Lallemand's theory of the pathology of spermatorrhœa, is the production, by various causes, of an irritation or inflammation of the prostatic portion of the urethra and of the seminal ducts. This view is not supported by anatomical evidence. Although cadaveric examinations, as is well said by M. Raige-Delorme,† have resulted in the discovery of diverse alterations of the genital organs in cases in which seminal losses *were presumed* to have existed, these alterations were so connected with important diseases of other parts of the genito-urinary apparatus, that little reliance can be placed in them as indicative of spermatorrhœa. These alterations consisted in ulcerations of the orifices of the ejaculatory ducts; injection and ulceration of various parts of these canals; analogous alterations of the vesiculæ seminales; purulent dépôts in the vesicles; in the

* Op. Cit., II. p. 404.

† *Dictionnaire de Médecine*, Vol. 28, p. 506.

vasa deferentia; in the epididymis, in the body of Highmose, and in the testicle. It is impossible to associate these lesions with spermatorrhœa, since in all the cases cited they were accompanied by more or less grave alterations of the urinary passages. One cannot avoid the reflection in looking over Lallemand's cases, published in his work on the genito-urinary organs in 1825, and in his work on seminal losses in 1839, that his cases as well as his theory were constructed to justify his practice. There is no proof that the anatomical lesions described by this author were causative of spermatorrhœa, or that they were even accompanied by it. On the other hand, the observations are numerous enough in which these alterations occurred without the production of spermatorrhœa. The truth is, undoubtedly, that there is no specific anatomical element in all that Lallemand has submitted, to be associated indissolubly with that disorder, and to which it may be attributed.

Various other admitted opinions of M. Lallemand, if submitted to impartial examination, will be found untenable. Thus, his views of the organic peculiarities which predispose to spermatorrhœa, his theory that the evil effects are deter-

mined by the amount of the loss, and his opinions in reference to diurnal losses, will be admitted as true by no one who has carefully investigated and observed for himself.

WHAT, THEN, IS THE TRUE PATHOLOGY OF SPERMATORRHŒA?—In our view, this disorder should rather take its place among the NEUROSES. Without denying the influence of excentric irritations, but rather admitting their importance, we are disposed to regard it, essentially, as a deranged functional state of the spinal system.

As a starting-point for our inquiry into the pathology of spermatorrhœa, it is necessary to comprehend the physiology of the sexual act. The phenomena of the sexual congress belong to the class of reflex actions. The excitation of the male organ is transmitted to the cord, and the impression is reflected over the testes, vesiculæ seminales, urethra, and appended muscular apparatus, producing the seminal ejaculation. The whole constitutes the venereal orgasm.* It approximates in many of its phenomena to epilepsy, and is

* Carpenter's Physiology, 5th Ed. p. 793. Kirke's Physiology, p. 411.

accompanied in some persons with an epileptiform seizure. This is more particularly exhibited in the act of masturbation, in which the excitation of the genital organs is more intense, the imagination more inflamed, and the orgasm more profound. There is a great expenditure of nervous force in a single act of coitus—much more so in the unlawful excitation—manifested by the languor, weakness, and mental feebleness which occur for some time afterwards. Of course, these effects will be experienced in a much greater degree when the orgasm is frequently repeated.

The generative apparatus of the male and female has a very intimate relation with the nervous system. It is the impression which the individuals of each sex make upon the organs of sense that excites those desires which have coitus for their object. There is a corresponding influence of the genital organs upon the nervous centres; for when semen accumulates in the reservoirs, the organs of generation transmit an influence to the cerebro-spinal centres, giving rise to sexual desire.

"The glans penis," says Kobelt,* "is the principal point of reunion of the sensitive nerves of

* Acton on the Reproductive Organs, p. 153.

the virile organ ; no other part which it regulates can be compared with it in this respect. In respect to richness in nerves, the glans penis yields to no other part of the economy, not even the organs of sense." According to Günther,* the division of the dorsal nerve of the penis, in the most powerful and erotic stallion, deprives the animal of sexual desire as completely as castration.

"Anatomically regarded," says Handfield Jones, "it is very remarkable how slowly the different nervous centres, or parts of a nervous centre, are connected by commissural fibres ; and from a pathological point of view, the same connexion is very manifest. The general exhaustion induced by excess in venery ; the reproduction of neuralgia in weakly persons by bodily exercise ; the effect of muscular exertion in producing drowsiness—are examples which show how excessive consumption of nerve-force in one part weakens it also in others," etc.

Experience has abundantly shown that the lesions resulting from masturbation are those due to expenditure of nervous force and derangement of the intimate and harmonious relation existing be-

* Acton on the Reproductive Organs, p. 153.

tween the sexual and cerebro-spinal systems, and not to a mere loss of seminal fluid; for under no other circumstances is so small a discharge from the body accompanied by such serious results. This conclusion is further strengthened by the more important effects which follow masturbation than spermatorrhœa, although the mere seminal loss in two cases may be exactly equal.

A marked feebleness of the intellectual faculties is observed after abuse; other parts of the nervous system also participate in the debility of the encephalon. The organs of sense, especially that of vision, lose their sensibility to their appropriate stimuli, and their functional activity is lowered. These evidences of disorder of the brain may proceed so far as complete alienation of the mental faculties. Epilepsy is a more common result of the impression made by this vice upon the central nervous system. Such effects were observed so long ago as the times of Hippocrates. In the work *De Morbis*,* occurs the following passage: *Tubes dorsalis a spinali medulla oritur, maxime vero recen-*

* Dr. Adams, the learned author of the Sydenham Society's edition of the works of Hippocrates, considers the book *De Morbis* as emanating from the Cnidian School. (See vol. I. pp. 92 and 96.)

tes sponso et libidinosos corripit. Febris sunt expertes, bene comedunt, et colliquantur. Quod si ita affectum perconteris, dicet, sibi videri ex superioribus partibus a capite velut fornicas in spinam descendere; quumque urinam aut stercus reddit, ipsi semen genitale copiosum et liquidum prodit; necque genitura intus concipitur et inter dormiendum cum uxore dormiat, nec ne semen profundat, etc. (Lib. II. cap.

19.) This may be freely rendered as follows:—*Tabes dorsalis* arises from the medulla spinalis, and happens to those chiefly, who are very libidinous or lately married. They are free from fever, have a good appetite, but yet waste away. If he be questioned who is thus affected, he will tell you that it seems to him as if ants were creeping down the spine from the top of his head. He discharges a great quantity of liquid semen when he urinates or goes to stool, and does not retain his semen in his sleep, but loses it whether he sleeps with his wife or not.

Celsus also alludes to similar effects produced by *nimia profusio seminis* which *tabe hominem consumat*.*

Under the same designation similar effects have, since the time of Hippocrates, been ascribed to mas-

* *De Medicina*, lib. IV. pp. 188. Edit. Milligan, Edinburgh, 1831.

turbation and venereal excesses by various German, French, and English writers. By Romberg,* however, the term, "tabes dorsalis," is restricted to a nervous disease, identical with the progressive locomotor ataxia of Duchenne. On the other hand, so recent an authority as Dr. Meryon† adheres to the ancient idea of tabes dorsalis, defining it as a "tractable form of paralysis, not unfrequently seen in youth and early manhood, which may be traced to the vicious and enervating habit of masturbation." How much soever authorities may differ about the nomenclature of the practical fact, there can be no doubt that paraplegia, incontinence of urine and fæces, altered and referred sensations in the inferior extremities, have been observed to follow venereal excesses.

Irritation of the genital organs not only produces a wide range of disturbances due to derangement of the nervous system, manifested by mania, melancholia, epilepsy, paraplegia, functional cardiac troubles, intestinal disorders, etc., but the

* A Manual of the Nervous Diseases of Man. Edition of Syd. Society, translated by Sieveking, Vol. II. p. 395.

† Practical and Pathological Researches on the Various Forms of Paralysis, p. 44. London, 1864.

converse fact is equally true, that disease of the cerebro-spinal system may produce serious derangement of the generative apparatus. This influence is well exhibited in the progressive locomotor ataxia. There occurs in this disease a peculiar degeneration of the posterior columns of the cord: a gelatiniform degeneration of the nerve-fibres, and an increase of the interweaving connective tissue. Amongst the earliest symptoms of this disorder, are spermatorrhœa, satyriasis, anaphrodisia, and impotence. The first is the earliest symptom, and continues during the whole of the first period. Next, diminution in the venereal desires, and difficulty in satisfying them, occur, and finally complete impotence results.* Priapism has been observed in this disease also, and is a not uncommon symptom in injuries to the cord.

We have thus, brought together in a group, a collection of facts, which seem conclusively to establish the dependence of the sexual function and that particular form of sexual derangement which we are here considering, upon the nervous

* *De l'Ataxie locomotrice, et en particulier de la maladie appelée Ataxie Locomotrice Progressive, par le Dr. Paul Jopinard.* Paris, 1865.

system. A careful distinction is to be made between spermatorrhœa, a symptom of lesion of the central nervous system, and spermatorrhœa, a symptom of functional derangement of the nervous centres due to a peripheral irritation.

We are now prepared to study the several groups or orders of symptoms, or the natural subdivisions of spermatorrhœa. The pathological conditions may be comprehended in three groups: genital; cerebral; spinal.

In the first, or genital form or phase, which is the most common, there are excessive sensibility of the sexual apparatus, and greatly increased reflex excitability of the cord.

In the cerebral form there are associated with the preceding condition certain disorders of the mind—melancholia, delusional insanity, and mania.

In the spinal form the functional derangement of the cord is either excessive and pronounced, or has resulted in organic lesion.

I.—GENITAL FORM.

The Sexual organs are relaxed; the testes tender, painful, and sometimes wasted; the erections feeble and the seminal flow watery. Slight causes

—an erotic idea, gentle friction, a voluptuous dream—will produce a feeble erection followed by a quick emission with but little sensation. Whenever an erection and an emission occur, there is an evident orgasm, but not nearly so pronounced as in the normal state. After every erection without seminal loss, there is a mucous flow from the urethra. A mixture of this mucus with the semen produces the so-called watery semen. The same mucous discharge is not unfrequently observed after urination and defecation. It alarms the patient, because he has been led to believe that it is seminal. These are the cases to which M. Lallemand applies the term “diurnal pollution.” If a proper examination of this fluid be made, it will be found not to contain spermatozoa. We need hardly remark that the presence of these bodies is essential to prove the existence of semen. No other test is at all applicable to the determination of this question, than the microscopic. It cannot be denied that spermatozoa may be found in the urine or the mucous secretion from the urethra, if a nocturnal emission, or an emission produced by natural or unnatural means, have recently occurred; but these fluids should be

examined, when this source of error may be eliminated. We are glad to have an opportunity of quoting in support of our opinion so able an observer as Prof. Flint,* who remarks on this subject—"In the most of these cases the fluid is either the *liquor prostaticus* or a secretion from the vesiculæ seminales. The microscope affords the only reliable mode of determining that the fluid is seminal. Were this mode of examination generally adopted, cases of spermatorrhœa would be extremely rare." We quote further some excellent remarks on this subject from Hassall:† "Care must be taken not to confound the discharge of urethral gleet with the seminal fluid; the distinction is easy, since the former is distinguished by the absence of infusoria, by the presence of scaly epithelium, and by the escape being in general continuous. Sometimes the gleet discharge occurs only after sexual excitement and lasts but for a short time, when, of course, its character is more apt to be mistaken. The prostatic fluid might also be mistaken for semen; in this the spermatozoa would also be absent, and in addition,

* Practice of Medicine, H. C. Lea. Phila. 1866.

† The Urine in Health and Disease. London. 1863.

the microscope would reveal in it the presence of the prostatic cylinders, and perhaps, also, of the peculiar lamellated concretions of phosphate of lime, which are found in the prostate in such numbers. Like the mucus from ordinary gleet, that from the prostate may also be continuous, but more frequently it appears only after violent efforts at defæcation, when a small quantity of matter may be expressed, forming only a drop or two, of a thick, stringy, and transparent fluid, which appears at the orifice of the urethra." Chambers, at a recent lecture at St. Mary's Hospital (*London Lancet*), declares that this mucous flow has no more pathological significance than the leucorrhœa of women. Again, Dunglison* says, "the presence of such a fluid in these circumstances, by no means shows that it is sperm. Indeed, it probably rarely is so, and is nothing more than the mucous fluid from the prostate or Cowper's glands." It seems a labor of supererogation to multiply authorities on this point. There can be no question that this mucous fluid is derived from the prostate, vesiculæ seminales, Cowper's glands, and from the follicles of the urethra. The frequent

* *Cyclopedia of Practical Medicine*. Am. Ed. Vol. p. 212.

excitement accompanied by increased blood supply, to which these parts are subjected, must induce a greater secretory activity in their glandular appendages. Hence we should expect to find blenorragia in cases of masturbation or spermatorrhœa. The urethra is red, injected, and exceedingly sensitive, and considerable irritation is referred to the region of the neck of the bladder and prostate gland. No other anatomical lesions can, with propriety, be attributed to spermatorrhœa. If any other be present, they are merely accidental or accessory and not essential. In this category may be placed those lesions described by Lallemand : thickening and stricture of the urethra, ulceration of the seminal ducts, suppuration in the prostate, etc.

In consequence of the hyper-sensibility of the glans and the urethra, erotic ideas are easily excited, and so readily does the reflex function of the cord respond to the peripheral irritation that the seminal loss may occur without a decided venereal orgasm being experienced. The essential pathological condition of the spinal system is a morbid increase of its reflex excitability. The frequent discharges of nervous force, consequent on vene-

real excitement and seminal losses, affect the supply to all the organs. The gastric and intestinal disorders, the tenesmus, the sense of heat and irritation about the rectum, the emaciation, the palpitations of the heart, the ocular troubles, the headache and mental despondency, etc., all arise from irregular distribution or loss of nervous force. The excitement of the sexual spinal system, if sufficiently prolonged, probably increases the blood supply to the cord, and certainly induces that particular molecular change which finds an expression in increased nervous susceptibility.

"It seems a well ascertained fact," says Handfield Jones,* "that the nervous tissue, both in the centres and in the peripheral extensions, becomes more excitable and mobile in proportion as its power becomes weaker. The motor nerve is more readily thrown into action, though the impulse it communicates is weak and cannot be long sustained. The sensory nerve is alive to the least impression, and becomes in certain cases gifted with almost preternatural acuteness. The brain is highly impressible, but incapable of any con-

* Functional Nervous Diseases. Op. Cit. p. 48.

tinuous effort; and headache is easily induced.
* * * * The vaso-motor nerves rapidly alternate between a state of excitement producing chills, and one of depression giving rise to heat-flushes and perspirations. It is very probable that this difference in the vital state of the nerves depends upon some molecular change in their composition, in consequence of defective nutrition; but no chemical research that I am aware of has yet proved such to be the case."

The phenomena of the genital form will be better exhibited by an illustrative case.

CASE I. This was a patient, aged 32, who had practised masturbation with great frequency as a youth, but on learning the evil consequences had resolutely abandoned the habit. He afterwards suffered from frequent nocturnal emissions, and had, finally, such sensitiveness of the genital organs, that the slightest excitement produced a feeble erection and an ejaculation. After micturition and defæcation he had a thick, tenacious discharge, which gave him great concern. He had, also, considerable irritation of the bladder, pain and aching about the arms, in the back and loins. He was pale and thin; his appetite was capricious,

and he suffered much from constipation, pain in the abdomen, borborygmi, and flatulence. His pulse was quick; hands and feet cool and damp. His special senses were unimpaired, he had no mental aberration in any form; he was despondent and brooded over his sexual condition, fearing impotence. Although more easily fatigued than usual, he was still capable of very considerable exertion. His sexual desire was not materially lessened, for he had contracted a marriage engagement with which he feared to comply. His fears had been aroused by advertisements in the newspapers and popular works on his malady, for the reading of which he had the usual propensity. His organs were not materially damaged. The prepuce was long and the penis lax; the left testis was somewhat atrophied, owing, probably, to a varicose condition of the veins of the cord on that side.

The cases of the genital form of spermatorrhœa vary very much in importance. They occupy all possible intermediate gradations between the pale and emaciated subject who suffers from nightly pollutions and severe gastric and cardiac symp-

toms, and the plethoric subject whose weekly nocturnal loss is an expression of a necessity of his sexual nature.

II.—CEREBRAL FORM.

The most serious mental effects are produced by masturbation. This vice, commenced at the period of puberty, interferes seriously with the development of the brain and the evolution of the mental faculties. We have already seen that this sad habit is contracted by those in whom the nervous apparatus predominates in activity over the muscular and digestive, and in whom the imaginative faculties are more highly cultivated than the reason and judgment. The mental effects of spermatorrhœa are, also, marked in those cases which we have denominated the cerebral.

It is to be remarked that the mental phenomena of spermatorrhœa are not always in proportion to the seminal losses. In the cerebral form, in addition to those lesions of the sexual spinal system, of the digestive apparatus, and of the circulation, described under the genital form, there are certain disorders of the mind. That spermatorrhœa will produce in one class of cases mental

disorders and not in another, indicates either that some predisposition to these disorders existed, or that the habit of self-pollution was merely an expression of mental alienation. The lascivious images which pervade the minds of boys possessed of the highly developed nervous organization of masturbators, are those of delusional insanity. In one case, the spermatorrhœa is a symptom of mental disorder; in the other, the spermatorrhœa is an exciting cause—the predisposition already existing.

There is, however, a cerebral phase of spermatorrhœa, which may be separated from the two preceding classes. It is characterized by indistinctness of vision, dilatation of the pupil, amblyopia, diplopia; diminution in the sensitiveness of the auditory apparatus; feebleness of voice; mental preoccupation, hebetude of mind, confusion of ideas, and a profound melancholy. "Patients who have been laboring under spermatorrhœa for a series of years, are much more liable to hypochondriasis and cerebral affection, than to tabes dorsalis," says Romberg.* Not only do long-continued and excessive seminal losses produce

* Vol. II., p. 400.

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these cerebral symptoms, but they may occur in those unhappy individuals who have acquired very false and highly-colored views of their condition from popular works on the subject. The termination of such cases is in suicidal monomania, delusional insanity, etc.

In that variety of the cerebral form in which a decided predisposition must be admitted to exist, to disorder of the intellectual faculties, there are found various forms of mental alienation. The chronic form is the most common, which corresponds to the *melancholia* of Pinel, or the *lypemania* of Esquirol, terminating in *dementia*. Several of the most characteristic cases, which have happened under my observation, correspond to the *delusional insanity* of Bucknill and Tuke.* Many writers are disposed to underrate the importance of this tendency in spermatorrhœa. To the influence of quack advertisements and popular works, which, of course, greatly exaggerate the evils of this disease, is ascribed the melancholy, the hypochondriasis, and other mental disorders which occur in the course of it. The statistics of any of our large insane asylums will illustrate

* Manual of Psychological Medicine. Phila. ed., p. 130.

the influence of masturbation in the production of mental alienation. As the different forms of pollution may not be separated, and as their influence is the same, we may adopt any of these statistics to establish our point. Thus in the Central Ohio Lunatic Asylum, 221 cases of insanity in twenty-seven years were referred to this cause; in the report of Dr. O. M. Langdon, Superintendent of Longview, for the year 1865, we find reported 68 cases of insanity produced by this vice, in a collection of 1181 cases of insanity from all causes. We have already given the opinion of Romberg on this point. Mr. Holmes Coote, in a discussion which followed Dr. Drysdale's paper on the "Medical Aspects of Prostitution," read before the Harveian Society of London, remarked that "he still entertained the opinion that there were worse evils appertaining to human weakness than prostitution. He had opportunities of witnessing the fact, that among the young there was no cause of insanity more common than indulging in habits which he would not further particularize, but which were known to result in the most complete dily and mental prostration."* We might add

* British Medical Journal, Feb. 17, 1866.

confirmatory testimony from a variety of sources, but the foregoing is sufficient for our purpose.

The cerebral form is exhibited in the following typical cases:

CASE II.—Was a young man admitted to St. John's Hospital as a private patient. *Æt.* 30; five feet five inches high; leuco-phlegmatic temperament; beard scanty; hair thin. At the time of admission he could not give a rational account of himself. His eye was wild; pupil very much dilated; face pale, thin, and haggard. He walked unsteadily because of disturbance of cerebral circulation; he was "dizzy." At night he was given up to various hallucinations; he did not sleep, but spent the night in talking in a wild and incoherent manner, in wandering about his room and beating upon the walls. During the day he was quiet, but his conversation was disconnected, his ideas wandering, and his speech confused. His appetite was capricious, his bowels constipated, and he had suffered greatly from borborygmi and abdominal pain. From his brother it was ascertained that he had been greatly addicted to natural and unnatural venereal excitement, and had suffered lately from frequent

involuntary losses. The state of his genital organs confirmed this.

CASE III.—Was similar to the preceding—a young man who had passed several years in the military service, during which time he had indulged very freely in the vice of masturbation. He was led to St. John's Hospital by a comrade; he could not walk without support, in consequence, he said, of "lightness of his head." He had neither delirium nor hallucinations, but he was reduced to a state of mental feebleness bordering on dementia. He was pale, thin, and had little appetite; his vision was indistinct; his pupils were dilated, and his hearing was dull and indistinct. All of his senses, indeed, were in a state of torpor. He admitted a degree of self-abuse, extending over several years, too revolting to be narrated, and had lately, after discontinuing it, suffered from a pitiable degree of seminal weakness.*

III.—SPINAL FORM.

Impairment of locomotion and spinal paralysis have long been associated with venereal excesses.

* Both of these cases formed the subject of a Clinical Lecture at St. John's Hospital, before the class of the Medical College of Ohio. Session of 1865-1866.

The progressive spinal paralysis, the *tabes dorsalis* of the Germans, and the *ataxiæ locomotrice progressive* of Duchenne, was formerly confounded with the effects of masturbation and excesses in venery. The differential diagnosis will be a subject for future consideration.

In the spinal form of spermatorrhœa there are weakness of inferior extremities, altered—diminished or perverted—and referred sensations, incontinence of urine and fæces, and sometimes paraplegia. These symptoms are additional to those described as pertaining to the genital form; they may also be superadded to the cerebral. In the following typical case, it will be seen that the spinal symptoms were distinctive.

CASE IV.—A travelling showman, æt. 35, came under my care, suffering from weakness, with perverted sensations of both inferior extremities. He had an ill-conditioned ulcer on the right leg; slight pressure as of riding on horseback, induced intractable ulcerations of buttocks and thighs. He had also, to a limited extent, incontinence both of urine and fæces. The sensibility of the skin, as to touch, pain, pressure, and the electric current, was diminished. He had a sense of formication

in his legs, and tingling in his feet. The tendo-achillis of each side was a little shortened. He volunteered the information that earlier in life he had been much addicted to onanism, and that since the habit was discontinued he had suffered from frequent nocturnal emissions. His mental powers were unimpaired. He had the unavoidable depression and anxiety, arising from his very miserable physical condition, and nothing more.

In what does the spinal lesion consist in these cases? We have stated that the important pathological condition in the genital form of spermatorrhœa is a morbid excitability of the reflex faculty, with congestion, probably of the cord. In the spinal form there is probably some structural lesion inappreciable by our ordinary means of investigation, a molecular change, possibly, or the nervous phenomena are of the reflex character. We have, however, no anatomical facts on which to base the former opinion—our knowledge of these cases being entirely clinical; but the symptoms and the results of treatment seem to confirm our view of the pathology. Schroeder

* On the Minute Structure and Functions of the Spinal Cord and Medulla Oblongata. Syd. Soc. Translation, p. 263.

Van Der Kolk,* also, has made some observations which tend to establish the same view. Says this able observer: "Onanism is commonly considered, and often correctly, to be a cause of epilepsy; but onanism and excitement of the sexual organs are, to a greater degree than is usually supposed, the result of irritation and congestion of the medulla oblongata. The opinion formerly advanced by Gall, as to the localization of the sexual impulse in the cerebellum, has been sufficiently refuted, and the close relation between the medulla oblongata and the action of the genital organs, is generally received by physiologists. Let it suffice to call to mind the occurrence of erection and emission in persons hanged, how the sexual action is exalted in idiopathic mania with irritation of the brain and medulla oblongata, how frequently, after injuries of the part, erection and emission, or perhaps impotence is observed. * * * * In the case of epilepsy I have just recorded this influence was very evident; the emissions disappeared for a time, when the sensibility and over irritation of the medulla oblongata had again discharged themselves in a fit. * * * * It is but a short time since a similar case occurred to

me, of a young man who was unable to continue his studies regularly, on account of epilepsy, apparently originating in onanism. A few days ago, I received a report, that for the last three months, after an issue had been by my advice established in the neck, neither the involuntary pollutions, which in this case also were very frequent, nor the epileptic attacks, which commonly returned every two or three weeks, had again appeared, while the patient's head had become much clearer, and he was able to continue his studies."

On the other hand Gall relates* a case of complete paraplegia, produced by sexual excess, in which no structural alteration of the cord could be detected, even by the most careful microscopic examination. This case is justly regarded as exceptional.

* Guy's Hospital Reports, 1858.

IV.

IMPOTENCE.

WE discuss this subject in so far as it relates to Spermatorrhœa only. Impotence should not be confounded with loss of procreating power. A man is said to be impotent when he is unable to perform the act of coitus. Capacity for sexual intercourse may exist without the power of procreation. The practice of masturbation, or spermatorrhœa, more usually results in impotence than in a mere loss of procreating power.

Long continued excitation of the sexual-spinal system, whether by natural or unnatural means, so inflames the imagination and exalts the reflex faculty that emission occurs before intromission of the male organ can take place, or after very imperfect coitus. The latter is the more usual condition for which the physician is consulted. Patients are peculiarly fearful and sensitive on this point. The morbid apprehension under which they labor, greatly increases their incompetence.

In some instances, without being at all seriously damaged in their sexual function, they are rendered temporarily impotent by the mere dread of failure. The London quack, Dr. Graham, understood the influence of the imagination upon the sexual congress. "Amongst the furniture of the 'Temple of Health' was a celestial bed, provided with costly draperies, and standing on glass legs. Married couples who slept on this couch were sure of being blessed with a beautiful progeny. For its use, one hundred pounds per night were demanded, and numerous persons of rank were foolish enough to comply with the terms."* The impotence of spermatorrhœa is not a permanent condition, unless serious cerebral or spinal complications have occurred. Ordinarily, the capacity for coitus returns with the cessation of the seminal losses—the evidence of a healthy functional state of the spinal cord. The loss of procreating power is not a frequent accompaniment of seminal weakness; the difficulty is in the intromission of the organ. Every practical physician is cognizant of instances of men whose semen had fertilizing power, but who were almost incapacitated for

* A Book about Doctors. Jeaffreson, p. 338.

the sexual congress, by reason of a great excitability of the reflex faculty.

The same condition may exist as a result of long continence in ardent temperaments. But these cases only require a little time and familiarity with the object of desire.

Excluding from consideration those organic deficiencies which may produce impotence, as foreign to the purpose of this work, it will suffice to allude to varicocele, and so-called "irritable testes," when they are due to sexual abuses.

It is exceedingly doubtful whether varicocele confined to the left testis, ever results in impotence. Some instances have occurred under our observation in which this disease produced atrophy of the testes, accompanied by a painful state of the right organ, and eventually in almost complete extinction of sexual desire. In those exceptional and rare cases, where the varicocele is double, and atrophy results, impotence necessarily occurs.

To the increased activity of the testes in secreting semen, has been attributed the varicose condition of the spermatic veins in spermatorrhœa. This view is hardly tenable. As the varicocele

occurs on the left side almost invariably, in consequence of an anatomical peculiarity, and as it is not a constant nor even a frequent complication, we may consider its presence, in general, as accidental. Opposed to this view, we should not omit mention of Mr. Hutchison's* opinion, that varicocele is of spinal origin. Mr. Hughlings Jackson† has reported a case which seems to confirm this view.

The relation of "irritable testis" to impotence is much more immediate. By this term, Sir Astley Cooper,‡ to whom we are indebted for the most of our information on this subject, intended to express a state of hyperæsthesia of the spermatic plexus. One or both testes are painful, sometimes exquisitely so, tender to the touch, and occasionally swollen. The epididymis and spermatic cord also become so painful that the weight of the testes gives intolerable pain; and pain is experienced in the back and loins. Notwithstanding these symptoms, the testes are not hot and inflamed; the swelling is paroxysmal, and is not

* London Hospital Reports, Vol. I., p. 77.

† Lancet, March 31, 1866.

‡ Observations on the Structure and Diseases of the Testis.—Chap. IV. London. 1830.

accompanied by fever. The general health is much impaired, partly in consequence of the suffering endured, and partly by reason of the disturbance of the nervous and digestive systems. The patient has a poor appetite; he suffers from indigestion; he is hysterical and despondent, and he is unable to sleep. Impotence is a usual attendant on this state. Venereal excesses, masturbation, and spermatorrhœa, are the causes. At least, we have frequently observed it to accompany spermatorrhœa, and in this case it proved the most troublesome and distressing symptom. The following case very well illustrates the signs and symptoms of this malady, occurring in connexion with seminal trouble.

CASE V.—A Jew, æt. 25, was admitted to St. John's Hospital, under the following circumstances: He had been married a week, but proved unable to consummate the sexual act, in consequence of which he was placed by his friends in the hospital to undergo treatment. He presented these symptoms: he was pale and sallow; his tongue coated; his appetite was poor; he had much abdominal pain, especially about the umbilicus, and he was constipated. The testes were very tender, con-

stantly painful, especially when pendent, and the cord was also painful. The testes were subject to periodical attacks of enlargement, which lasted a few days and then subsided, there being, however, no redness nor increased heat, but only increased tenderness. He experienced various nervous symptoms; amongst others he had a well marked *globus hystericus*, and he shed tears on the least provocation. He admitted to very great sexual indulgences for several years, which were followed by spermatorrhœa. Since the occurrence of irritability of the testes, he had been entirely without sexual desire. He admitted that he had not been able to effect the sexual congress since his marriage.*

Even when it does not result in impotence hyperæsthesia of the spermatic plexus produces distressing nervous symptoms of a hysterical character. The various pelvic pains, occurring in spermatorrhœa, and referred to the prostate, neck of the bladder, rectum, perineum, and testes, are probably due to the same cause.

* This patient left the hospital after a stay of four weeks. He visited me recently, to assure me that he was restored to sexual soundness.

V.

DIAGNOSIS.

THE diagnosis of spermatorrhœa is usually not attended with difficulty. When the emissions take place with sensible erection, and the venereal orgasm, there can be no mistake. The real difficulty is the uncertainty with regard to those so-called "diurnal losses," in the act of defecation and urination. The sources of error in respect to these have already been pointed out. The emission of semen in the natural and unnatural way, may furnish spermatozoa to the urethral mucus, or to the urine. In the same way the urine may be charged with spermatozoa when stricture of the urethra exists, in which case the semen is forced by the effort of ejaculation backwards into the bladder. Lallemand has defined the appearances which semen in the urine presents to the naked eye. Nothing can be more fallacious. As the presence of spermatozoa is the only conclusive evidence, the fact can only be determined

by a power of three hundred diameters. We have not been able to detect these bodies in the urine except after voluntary or sensible involuntary losses, and when sources of error could be eliminated, never in the urethral mucus, nor in the compound fluid made up of the *liquor prostaticus*, of the secretion from Cowper's glands, and of the secretion from the follicles of the urethra.

The means of diagnosis, then, in spermatorrhœa, rest upon the objective and subjective symptoms of that state. If the patient be not conscious of seminal losses, either after erection or the venereal orgasm, feeble though they be, he may be considered free from them. The conviction of the patient that a viscous fluid, which he may by pressure on the urethra force from the orifice, or which is discharged after urination and defecation, consists of semen, can by no means determine the question. If, on proper microscopic examination, this fluid is ascertained to be free from spermatozoa, the question must be considered as definitively settled.

It may be required to distinguish between spermatorrhœa and the condition of anæmia due to chronic disease, especially of the digestive apparatus. The facial expression and the peculiar

furtive, uneasy, suspicious manner of the patient in the former are, here, the chief means of diagnosis; but as these signs are not conclusive, there may be great difficulty in making up a correct opinion. In cases of spermatorrhœa, the nervous phenomena are much more strongly pronounced than in anæmia from other causes. Again, these nervous symptoms appear to be due rather to a loss of nervous force than to impaired nutrition, the result of chronic disease of a special organ or system.

The cerebral and spinal forms of spermatorrhœa are to be distinguished from cases of mental derangement, nervous disorders, and paralysis, arising from other causes. Romberg, as we have seen, considers hypochondriasis more common than paraplegia. The hypochondriasis of Spermatorrhœa is to be distinguished from the same mental state due to other causes, by the evident derangement of the nervous system which has preceded or accompanied it, by the subjective mental phenomena of the patient, by the evident weakness and debility of the muscular, digestive, and circulatory systems, and probably, also, by the admissions of the patient. In hypochondriasis arising under other

conditions, the patient is generally well nourished, his digestion active, and all his sensations are referred to some special organ which is assumed by him to be in a condition of disease.

The cases of insanity arising from self-pollution or spermatorrhœa are diagnosed by reference to the history of the case. Insanity does not so frequently occur in the case of spermatorrhœa as hypochondria and a form of trembling delirium similar to that produced by chronic alcoholic poisoning. The dulness of the mental faculties and of the organs of special sense, which occurs in spermatorrhœa, is hardly found so associated in cerebral diseases arising from other causes. The objective signs in the former should not be omitted from consideration. Many cases of masturbation and spermatorrhœa have a cerebral origin; under these circumstances it is difficult to determine which was causative.

Schroeder Van Der Kolk, as we have seen, is disposed to ascribe great influence to changes in the medulla oblongata in the production of spermatorrhœa, especially in those cases followed by epilepsy. It is probable, however, that these changes were the result of prolonged excitation of

the nerve centre due to the peripheral irritation.

The spinal form of spermatorrhœa is most frequently confounded with the progressive locomotor ataxia. This confusion has arisen in part from the use of the term *tabes dorsalis*, applied by Hippocrates and his followers to accidents produced by excessive venery. One of the earliest symptoms of the progressive locomotor ataxia, is spermal losses. In a case which we have recently reported,* frequent seminal losses was the only symptom which preceded the development of the ataxia and the ocular phenomena. Accompanying the spermatorrhœa, was an unusual activity of the sexual organs and increase of desire. Trousseau† alludes to cases in which the singular faculty existed of being able to repeat the sexual act frequently in a very short space of time; one of these admitted to having intercourse six or seven times in twenty-four hours—"a deviation from the physiological state."

If we adopt the arrangement proposed by M. Duchenne,‡ the progressive locomotor ataxia is

* The Cincinnati Journal of Medicine, April, 1866.

† *Clinique Médicale de l'Hôtel Dde Paris. cin Tome deuxième*, p. 534, et seq. Paris, 1865.

‡ Topinard. Op. cit. p. 172.

divisible into three periods: the first period is characterized by three symptoms—pains, ocular troubles, and anaphrodisia; the second by alterations of the cutaneous and muscular sensibility of the inferior extremities, and the third by the extension of the same troubles to the superior extremities. With regard to the symptoms referrible to the generative organs four may be given: spermatorrhœa, satyriasis, anaphrodisia, and impotence. These symptoms all belong to Duchenne's first period. Whatever difficulty in diagnosis may be experienced will be encountered only in the first period. When the peculiar troubles manifest themselves, and the loss of power of coordinating muscular movements, and the alterations of muscular and cutaneous sensibilities occur, the diagnosis will no longer be a matter of difficulty.

VI.

PROGNOSIS.

It may be stated as a general rule that the prognosis of spermatorrhœa is not so unfavorable as the opinions of many writers—especially the popular writers—would indicate.

It is favorable, if there be not excessive excitability of the sexual spinal system, extended over a long period.

The longer the cause has been in action, and the more numerous and serious the lesions of the nerve centres, the more unfavorable.

If spermatozoa are absent from the semen; if for a long time no erections have occurred, and tabescence have supervened, the prognosis will be unfavorable.*

In the case of youths addicted to masturbation from an early period, in whom mental alienation has resulted, the prognosis will be unfavorable.

* Lebert, *Handbuch der praktischen Medizin*, etc. Op. cit. p. 783. Vol. II.

It is favorable in adults, in proportion to the length of time which has intervened from the cessation of the venereal excesses, provided there have occurred no organic changes.

We append some excellent observations on this subject from Hassall.*

“Writers have gone to the length of asserting that any involuntary discharge occurring oftener than once a month is hurtful. Seeing how much individual health and vigor vary, it is impossible to lay down any merely numerical rule of this kind: what one person bears with impunity, if not with advantage, would exert a most prejudicial effect upon another; whether it is injurious or not, must be judged of, as already stated, by the results. When the emissions, although they may not occur oftener than once a fortnight, produce debility, chilliness, indisposition to mental or bodily exertion, they are too frequent to be compatible with health: this is a safe and unerring test.

“Notwithstanding the pitiable effects of long-continued and frequent spermatorrhœa, especially when accompanied by great debility, this affection is one which in nearly every case admits of cure.

* The Urine in Health and Disease. Op. cit. p. 338.

"The cases themselves vary greatly in severity. When the cause depends upon simple plethora the cure is easily effected.

"It is also more amenable to treatment when it arises from local inflammation and irritation.

"But when it results from abuse or over-indulgence, especially long-continued, and the health has in consequence become much impaired, the treatment required is often tedious; but the cases resulting from these causes, also, differ much from each other in severity.

"When the involuntary discharges are nocturnal only, when they awaken the sleeper, and are attended with perfect erection and sensation, the case is amongst the more favorable. When the erections are slight only, and but little sensation accompanies the emission, it is more serious. When the losses occur without erection and consciousness, they are still more difficult to cure; and when in addition, day pollutions are super-added to those of the night, the case is usually one which taxes the patience and perseverance of both patient and physician.

"It has been stated that one of the results induced by spermatorrhœa, is enfeebled sexual power,

proceeding in the worst cases to *impotence*. Now, this condition, when it arises from this cause, is also, in the great majority of cases, curable; in fact the spermatorrhœa being cured, the impotence gradually ceases; but the more frequent and long continued the seminal losses, usually the more severe and lasting the impotence."

We present these views of the distinguished author the more gladly, because they are confirmatory of our own. Mr. Acton* expresses similar views:

"The prognosis of an ordinary case is, if the patient will honestly work with the surgeon, very favorable. Even when nocturnal emissions are alarmingly frequent, occurring night after night, and sometimes more than once in a night, and perfectly prostrating the patient, still they are—when they have not been neglected for a long time—quite under the control of local treatment. But at a later stage, when the emission has become a confirmed habit, the prognosis is not so favorable.

* * * * * It is a fact so generally known, that the reader need scarcely be more than reminded of it, that one nocturnal emission in a

* On the Reproductive Organs. Op. cit. p. 180.

reduced constitution often weakens the subject of it much more than connexion several times the same night would a healthy person: and that erotic dreams attended with pleasure leave less weakness than when gratification is not derived from the act of connexion."

VII.

TREATMENT.

A CORRECT view of the pathology of spermatorrhœa is necessary to its successful curative treatment.

If spermatorrhœa be a purely local disease—an inflammation and ulceration of the prostatic portion of the urethra—local treatment only will be required. If, however, the essential condition consists of an increased reflex excitability of the spinal cord due to frequent peripheral irritation seated in the urethra, then the local must be regarded as accessory to the general treatment. The relative importance of these two views as to the causation of the disease, should be definitely ascertained. A particular plan of treatment is followed by the adherents of each view. A wise therapist will not reject whatever is beneficial in either place.

THE LOCAL TREATMENT consists in the application of the *porte caustique* to the prostatic portion

of the urethra; the use of injections of the nitrate of silver, sulphate of copper, acetate of lead, etc.; certain mechanical expedients; the internal administration of copaiba, cubebs, and other remedies of this class; cold hip bathing, and injections of cold water into the rectum, etc. The most important of these measures is the use of the *porte caustique*. This instrument has been largely employed since its introduction for this purpose. Few practical surgeons at the present day will assent to the dictum of Lallemand, that "two-thirds of the cases of spermatorrhœa would be beyond the reach of medical assistance, if it were not for the good effects produced by the application of the nitrate of silver to the prostatic portion of the urethra."

It is very desirable, however, to ascertain its real importance and the limits of its application.

The Porte Caustique.—This instrument, which is so closely associated with the name of Lallemand, had an existence long anterior to his employment of it. Ambrose Paré devised an instrument for cauterizing the urethra, which is the progenitor of the modern instruments for this purpose. It consisted of a silver canula and a stylet of the same metal, having at its extremity a tampon of linen

which was dusted with powdered caustic. Loizeau is said to have cured King Henry IV. of France of an induration of the urethra (organic stricture) with a similar instrument. Wiseman of England, and afterwards Hunter, employed the nitrate of silver in a *porte caustique*, but the latter substituted a caustic holder for the linen tampon. Sir Everard Home* was a warm advocate for the proceeding of Hunter. The instrument of Ducamp was the more immediate progenitor of Lallemand's. It was a *porte caustique* composed of a gum elastic canula, the stylet being an ordinary bougie, and of a caustic holder of platinum which was attached to the bougie. Amussat† in 1824 also invented a *porte caustique*, the canula being of silver, and the stylet, of the same metal, contained at its extremity a platinum point for lodging the caustic. About the same time Lallemand proposed his instrument, and a discussion arose as to the value of each in-

* Practical Observations on the Treatment of Strictures of the Urethra and Esophagus. Second Edition. London. 1797. P. 116 et seq.

† *Leçon du Amussat, Sur les rétentions d'urine, etc.* Paris, 1831, 115 et seq., from which many of these particulars have been obtained.

strument respectively. Differing in merely mechanical arrangements, the object to be attained in the use of them was essentially the same. The application of the caustic was employed in cases of thickening of the canal, ulceration and stricture due to chronic inflammation. We find in Lallemand's treatise on the disease of the genito-urinary organs,* the germ of those ideas put forth in full maturity fifteen years later in his work *Des pertes séminales involontaires*. After a discussion of the changes produced by blenorrhagia, he proceeds as follows:

"It may be easily conceived that irritation of the mucous membrane of the prostatic portion, may extend itself to the ejaculatory canals, the vesiculæ seminales, etc., and the proof is, the engorgement of the testicle which so frequently accompanies stricture. The results of this irritation of the seminal reservoirs and ejaculatory ducts are, that the act of coitus is promptly followed by the ejaculation; that the patients have frequent nocturnal pollutions, and that in some cases the voluptuous sensation is accompanied by a more or less

* *Observations sur les Maladies des Organs Génito-urinaires. Première Partie*, Paris, 1825. P. 158.

acute pain. Still further, the irritation augmenting, the seminal emission takes place with an incomplete erection, or is expelled with the last drops of urine. * * * * * *Governed by analogy and by direct experiences, I have not hesitated to apply to these parts the nitrate of silver ;* the mucous membrane takes on a new action ; a benign inflammation supplants the chronic inflammation ; tone is restored to the tissues, and the mucous secretion progressively diminishes. The original idea of Lallemand, following Paré, Hunter, Ducamp, and others, was the treatment of these chronic inflammatory affections of the urethra resulting in stricture, ulceration, and abscess. The extension of the method of cauterization to the treatment of spermatorrhœa was an after thought. Very diverse views have obtained since, as to the utility of the *porte caustique*. It has not, in general, produced that favorable impression upon those cases, claimed for it by its advocates. Not only does it often fail to cure the patient, but the application of the caustic is frequently followed by most serious consequences. In all cases it produces great irritation, frequently strangury and bloody urine, and sometimes, severe urethritis and cysti-

tis. Too long contact of the caustic may induce induration and organic stricture, a very serious complication of the case. Notwithstanding these sometimes unfortunate results, some surgeons adhere to it, and a few claim all that Ducamp, or Amussat, or Hunter, or Home, did in former times. Mr. Acton, for instance, is a zealous partisan of the *porte caustique*, contending [p. 225] that as far as his own experience is concerned, it "fully bears out" the statement of Lallemand, as to the infrequency of any ill consequences arising from its use. We should not, therefore, reject this practice of cauterization entirely. Under what circumstances may we resort to it? There appear to be two classes of cases in which it is indicated :

"1st.—Those in which chronic inflammatory changes exist as a complication of spermatorrhœa.

"2d.—Those in which the moral effect of the application is desirable.

"We have already, we think, conclusively established that the lesions of the prostatic portion of the urethra, described by Lallemand as constant to spermatorrhœa, are only accidental. They are produced by inflammation arising in the course of Gonorrhœa, as appears evident enough indeed, on

the perusal of the cases given by Lallemand in his treatise on diseases of the urinary organs. At all events, it is not at all common to find such changes in the urethra of patients suffering from seminal weakness in this country. A hyperæsthetic state of the canal, especially of the prostatic part, is, on the other hand, a most usual condition.

Romberg * has very well indicated the cases of the second class to which the use of the *porte caustique* is adapted: "Spermatorrhœa, to which not unfrequently hypochondriasis is to be attributed, requires special attention, and if all other remedies fail we must have recourse to cauterization of the urethra, which has a *moral* as well as a physical effect, by withdrawing the patient's attention from his malady." It is not improbable that to this "moral effect" is to be attributed much of whatever good is accomplished by the use of the *porte caustique*.

We would limit the application of caustic, then, to those conditions of inflammation, ulceration, and hyperæsthesia of the prostatic portion of the urethra, which proved refractory to other less

* Manual of the Nervous Diseases of Man. Op. cit. Vol. I. p. 188.

painful and dangerous methods. For the moral effect, we would limit it to those obstinate cases accompanied with severe hypochondria, in which the fancy of the patient referred all the suffering to the region of the prostate, and to the cases of youths who persevered in the vice of masturbation.

The use of the *porte caustique* is not attended with difficulty. Certain precautions, however, are requisite to avoid injury to the parts. In the first place, it is necessary to ascertain the length of the canal, which may be done by introducing the catheter and observing the moment it enters the bladder. The length of the urethra from the meatus to the bladder is then marked on the canula. The curette is now charged with melted nitrate of silver and placed in the canula, which is oiled and introduced the desired length. The operator, however, will perceive when he enters the sphincter of the bladder, by the sensation of the passage of the enlarged extremity of the instrument. Now when this enlarged extremity is withdrawn through the sphincter the sensation will be quite distinct, and the operator will know that he is in the prostatic part. It is only neces-

sary to withdraw the outer canula half an inch and rotate rapidly the curette, withdrawing it quickly into the canula. Before the operation is performed the patient should empty the bladder, and he should not make water for some hours afterwards. The recumbent position should be enjoined, diluents and alkalies prescribed, and a moderate diet directed. Should there be much pain, opiates, morphia, or chlorodyne may be prescribed, or an anodyne suppository, or an enema of starch and laudanum may be introduced. For several days afterwards considerable irritation is experienced, even when most care has been exercised.

Injections.—If cauterization be desirable, it may be accomplished by injection. This is certainly as effectual, and much safer than the preceding operation. A special instrument, such as Mr. Acton's glass syringe, may be employed, or an ordinary glass syringe which may be fitted to a silver catheter, will suffice for the purpose. The catheter must be introduced into the bladder, and then withdrawn into the prostatic portion of the urethra. The solution of nitrate of silver, or of sulphate of copper, or of acetate of lead, may

now be injected, and allowed to apply itself thoroughly to the mucous surface. The first named salt is preferable, and may be used of the strength of ten grains or more to an ounce of distilled water, according to the requirements of the case. The same precautions as to the after treatment of the patient are necessary as described in the previous paragraph. The effects of this operation are much less severe than the application of the solid caustic by Lallemand's instrument. Injections by an ordinary gonorrhœal syringe are sometimes recommended, but they are entirely futile. It is difficult, if not impossible, to make sufficient application in this way to the prostatic part of the urethra.

Catheterism is beneficial in those states of hyperæsthesia of the prostatic portion already alluded to. The mere distension of the canal by a full-sized bougie or catheter, has the effect to allay the excessive sensibility of the parts, and the moral effect of the introduction of the instrument is not inconsiderable. This measure should not be neglected in severe and protracted cases.

Other instrumental methods.—We may classify under this head various mechanical appliances to

prevent involuntary seminal discharges. A useful expedient of this kind is a leather ring armed with metallic points large enough to be worn without discomfort until erection occurs, when the pricking will arouse the patient. This instrument may be employed by those who have decided erections and the emission with a distinct orgasm. Trousseau* recommends the introduction of a ball into the rectum, large enough to compress the seminal ducts—a truly barbarous contrivance. This instrument could not prevent erection and venereal excitement, although it might prevent emission, or force the semen backwards into the bladder. Notwithstanding the proposition comes from so distinguished a man as Trousseau, we must be permitted to express our decided disapprobation of it. In the same category may be classed the method of acupuncture. This consists in passing long needles into the prostate, vesiculæ seminales, and sometimes into the testes and vasa deferentia. Lallemand thinks it unfortunate that acupuncture has fallen into disuse! We can hardly join in his regrets. A general objection may be urged against all of

* *Clinique Médicale de l'Hotel Dieu de Paris.* Paris. 1865.

those mechanical appliances, that they fix the attention of the patient upon his infirmity, thereby retarding recovery.

The internal medicines intended to act locally, are chiefly copaiba and cubebs. They need only be mentioned to be condemned, for the irritation which they produce in the mucous membrane of the stomach and kidney will more than counter-balance any possible good which they can accomplish in the urethra. Enemas of cold water and other medicaments and suppositories are capable of much more useful result.

The foregoing methods are of the surgical order.

THE MEDICAL TREATMENT has consisted in the main in efforts to improve the general health by appropriate tonics, as iron, quinine, strychnia, sea-bathing, douches, etc.; by suitable dietetics; by improved hygiene, etc. Conjoined with these measures anaphrodisiacs are employed as they seem to be indicated.

REMEDIES EMPLOYED IN THE TREATMENT OF SPERMATORRHŒA.—It will be convenient to dis-

cuss under this head the actions and uses of the most approved remedies.

Anaphrodisiacs.—One of the oldest of these remedies is camphor. *Camphora per nares castrat odore mares*, was an aphorism of the school of Salernum. It is not, however, a very valuable remedy. To produce the desired anaphrodisiac effect large doses are necessary; it frequently fails, and its action upon the stomach is unpleasant, giving rise to a sense of heat and burning, and followed by disagreeable eructations.

Lupulin is much employed by many distinguished therapeutists. Thus it is a favorite remedy with Lebert,* who gives it in combination with camphor. It has considerable efficacy as an anaphrodisiac, but, like camphor, it is uncertain. Conium and Belladonna are quite as efficient if given in sufficient doses, and are considerably more certain. Conium, particularly, is not given in doses sufficient to produce its peculiar effects upon the genital organs, as ordinarily prescribed. Five to fifteen grains of the extract, according to its freshness and activity, may be administered at a single dose. In this city, some practitioners em-

* Op. cit. Vol. ii. p. 587.

ploy as much as a half-drachm at a dose, but so large a quantity as this would hardly be safe if the extract had the proper officinal strength. Conium and Belladonna are, however, chiefly valuable when administered with Bromide of Potassium, or other true anaphrodisiacs.

The most important agent of this class, the most efficient and certain, and the least distressing in its immediate and remote effects, when freely administered, is the Bromide of Potassium. The anaphrodisiac property of this drug is now almost universally acknowledged, but the conditions of its success and failure have not been as definitely determined as is desirable. There are yet some sceptics who disbelieve in this property of the bromide of potassium. One of the most recent and pretentious of them is Dr. S. W. Duckworth Williams.* The cases submitted by him in proof of his views serve very well to illustrate the conditions under which the bromide of potassium fails to produce its characteristic effects. We accordingly reproduce them in Dr. Williams's

* On the Efficacy of the Bromide of Potassium in Epilepsy and certain Psychological Affections. Churchill, London, 1865. (Pamphlet.)

words, as they are very suitable to our purpose. "Dr. Crichton Browne, in a pamphlet on 'The Action of the Bromide of Potassium upon the Nervous System,' published since I commenced writing these remarks, is very much inclined to allow it strong antaphrodisiac properties, although I cannot quite perceive on what data. He owns that he had had no opportunity of trying the bromide of potassium in simple nymphomania, although he used it without effect in one patient who was in a state of mania, following upon melancholia, and in whom there was presumed to be excitement of the sexual feelings, on account of the extraordinary obscenity of language which she used. Now, I have tried it in every variety of uterine affection that has come within my reach, including nymphomania, satyriasis, menorrhagia, amenorrhœa, dysmenorrhœa, etc., etc., but without perceiving the least benefit accrue. * * * * *

I had under treatment at one time two cases that seemed especially well adapted for favoring the antaphrodisiac properties of this medicine. They were both strong, healthy girls, the one a lady, the other a domestic servant. Both were admitted into the asylum at Northampton, suffering from

simple mania without any positive delusion. They were lively, excitable, restless, and extremely volatile, often able to command their faculties sufficiently to converse calmly and rationally for a few minutes on any ordinary subject, but liable at any moment to burst out laughing or into a fit of tears without any visible cause, or to begin to rave and scream, or swear; both were fine, handsome, fully developed young women; both were most indecent in language, voice, and gesture, and both openly practised self-pollution. The bromide of potassium was given to them in doses of gr. v. *bis die* in a little pure water, and increased up to gr. xx., and although both were much affected by its use, and both became pale and thin, and reduced, and their circulation powerfully controlled (indeed, in one case the pulsations were reduced from 90 to 60 beats in a minute), nevertheless they persisted in their bad habits, and their sensuality became, if possible, more confirmed. The administration of the medicine was persisted in for nearly twelve months in both cases.

"Another case in which I tried it was that of a married lady, nearly 40 years of age, in

chronic mania, and at the same time I made some observations as to the influence of the bromide on the heart's action. This lady was extremely amative, fell in love with every person of the opposite sex she encountered, and was in the habit of writing the most obscene letters to all her male acquaintances. Her pulse was habitually about 90—tolerably strong and full. Being of a strong constitution, I commenced by giving gr. xv. *bis diè*. About an hour after the third dose her pulse was 76; two hours from that time it had almost regained its accustomed frequency, but in an hour's time from the fourth dose it was reduced to 70, and on one occasion during the first week it was nearly as low as 60. Combined with this decrease in the circulation there was, as might be expected, marked languor and ennui almost amounting to debility, and she seemed inclined to maintain the recumbent position constantly; but I cannot say that her lascivious wishes or ideas were in the least disturbed, or that her advances were marked by more delicacy; *au contraire*, I am not quite sure that she was not worse."

The experience of Dr. Williams, which seems so entirely opposed to that of other observers, is

easily interpreted by a knowledge of the conditions which retard or altogether prevent the action of the bromide of potassium. In some investigations, published recently,* we attempted to define these conditions. Our conclusions were embodied in the following:

"Its physiological effects are not very decided, and are readily modified by any local disturbance.

"Its therapeutical action is still more decidedly influenced by local morbid processes.

"It is indicated where a sedative to the nervous system is required, e. g.—in insomnia; too great reflex excitability; nervous and spasmodic affections of the larynx and bronchi; sexual excitement, and in an irritable state of the sexual organs.

"It will be effectual in the foregoing conditions, in proportion to the degree in which structural lesions are absent, or in other words, in proportion to the degree in which these morbid states are functional rather than organic."

These conclusions, the result of observation and

* Experimental Investigations into the Actions and Uses of the Bromide of Potassium. Cincinnati Lancet and Observer, 1865.

experiment, afford us a satisfactory solution of the cause of failure in the use of the bromide of potassium in cases such as those described by Dr. Williams. The cases of sexual excitement in mania are due, as is shown by Schroeder Van Der Kolk, to structural alteration in the medulla oblongata, the centre, according to this author, of the sexual impulse. The bromide of potassium can have no influence over these structural alterations, and hence cannot control the manifestations of sexual excitement which depend upon them.

Aphrodisiacs.—These are indicated under certain circumstances. The tincture of cantharides is sometimes beneficial in cases of great atony and relaxation—those characterized by profuse mucous discharge, so-called diurnal pollutions, very feeble power of erection, and absence of sexual desire. It is contra-indicated where much hyperæsthesia of the prostatic portion of the urethra exists. To prevent its irritant effects, or at least to reduce them to the minimum, opium, or cannabis indica, or chlorodyne, may be advantageously combined with it. The red or amorphous Phosphorus may be given in the same class of cases as suggested for the tincture of cantharides. Nux vomica is

adapted to those cases in which it is desired to restore the functional activity of the sexual organs, after the state of quiescence induced by the prolonged administration of anaphrodisiacs. *Cimicifuga* (*actea racemosa*) has seemed to me to possess considerable aphrodisiac power, and has proved useful in cases of long standing spermatorrhœa accompanied by nervousness and anxiety, and diminished sexual desire.

Galvanism, especially the direct current, and static electricity, are often decidedly aphrodisiac, and are probably applicable to more numerous cases than any other remedy of the class. The moral effect of galvanism is too important to be disregarded.

Ergot has been much extolled in those cases in which emission takes place quickly with feeble erections.

Tonics.—Iron, quinine, the vegetable bitters, the mineral acids, are indicated in anæmic cases. The *hygienica*, air, exercise, bathing, travel, etc., are valuable adjuncts to the remedial measures.

THE THERAPEUTICAL MANAGEMENT OF SPERMATORRHŒA comprehends—

First, the treatment of the causes.

Second, the treatment of the malady.

The Treatment of the Causes.—We have already expressed the opinion that venereal excesses, and especially masturbation, are the causes of spermatorrhœa, in a vast majority of cases as they occur in this country. Hence it is important to recognise this vice at an early period, to prevent the immediate and remote consequences of its continued perpetration.

We have already seen that this vice is contracted chiefly by boys in whom the nervous preponderates over the muscular and digestive systems, and that certain moral and social circumstances, and organic peculiarities, increase the tendency to it. These influences must, as far as possible, be repressed. Of course, it is not within the power of the physician to alter those inherent mental and physical defects which exercise such a baneful influence; but much may be done to diminish the activity of the nervous system, and to restore the balance between it and the other systems. There-

fore, to the physical culture of boys possessing these inherited peculiarities too great importance cannot be attached. The development of the muscular and digestive systems should be promoted by every agency. Open air exercise, constant physical employment, avoidance of confinement and idleness, cold bathing, etc., are the means necessary for this purpose. Lebert* places chief reliance upon these hygienic means in all cases of masturbation and spermatorrhœa. The principal organic peculiarity promotive of this vice, is phymosis. Where this condition exists, the operation of circumcision is proper. A long and contracted prepuce hinders the development of the penis, and by retaining the moisture and secretions of the part, increases the sensibility of the glans.

Ignorance of the character and tendency of the habit favors the perpetration of masturbation. Parents and public educators have a sad duty to perform in this connection which they naturally shrink from. In a large majority of cases, the habit would be discontinued, if the dreadful consequences of it were plainly set forth to the unfortunate victims. This becomes especially necessary

* Op. cit. p. 784. Vol. ii.

in boarding schools and in other public institutions where numbers of boys are congregated.

It is also very important to prevent suggestive novels, and books of every description having a tendency to excite erotic ideas, falling into the hands of these youths.

As a general rule it is sufficient in cases of masturbation to set forth clearly the dangers of the practice; to institute a thorough system of physical culture; to reduce the mental work; to keep the body occupied; to correct, if possible, any organic imperfection which may be remedied (phymosis), in order to effect to a cure. In some inveterate cases this may not be sufficient. The habit may be so confirmed, the instincts so low, and the moral obliquity so great, that no means other than physical restraint will prevent the perpetration of the act. The mechanical appliances may be assisted by anaphrodisiacs.

Mr. Heckford* has recently published a paper showing the great value of "circumcision as a remedial measure in certain forms of epilepsy, chorea, &c." In the very instructive cases given by Mr. Heckford, the convulsive affections de-

* London Hospital Reports, 1865. Vol. II. p. 62.

pended upon masturbation, in one at the tender age of *sixteen months*. This remarkable case, however, differed from that reported by Mr. South (ante) in that there was no abnormal development of the genital organs.

As the operation of circumcision is easily performed, and is without danger to life, it should not be omitted from the treatment in two classes of cases: 1. Those in which the habit of masturbation is due to the hyperæsthesia of the glans produced by an elongated prepuce and the irritation of the retained sebaceous matter; and 2. In those cases in which the same cause (a peripheral irritation) induces the venereal orgasm and involuntary discharge.

Although we do not deny the possibility of it, we regard it as rather improbable that a mere peripheral irritation, such as an irritable or inflamed state of the prostatic portion of the urethra, or a balanitis, will of itself produce the reflex phenomena of spermatorrhœa. Such irritation, however, will undoubtedly increase the morbid excitability of the reflex faculty, if it have already been aroused by such causes as masturbation and venereal excesses.

Ceasing an ill-habit may suffice in many cases

to cure these local irritations. The operation of circumcision should be performed when the prepuce is long, the glans moist, and epithelium very sensitive. The frequent application of cold water to the glans when in this condition, is of great service. The tanno-glycerine (3 i— $\bar{3}$ i) may also be applied daily to the glans with advantage. Similar measures may be adopted for an irritation in the prostatic part of the urethra: daily injections of cold water; the injection through a silver catheter in the manner already recommended, of the tanno-glycerine, or of a solution of nitrate of silver. But the irritable state of the prostatic portion is more properly an effect rather than a cause of spermatorrhœa; accordingly we postpone the further consideration of it until we come to treat of the therapeutic measures proper to the malady itself.

Treatment of the Malady.—Remedies should be employed with reference to the pathological states of the several phases of spermatorrhœa.

In the genital form there are associated with the peripheral irritation increased reflex excitability and derangement of the primary assimilation. There may be a condition of plethora, or more or less emaciation; much more usually, the latter.

therapeutical methods are indicated in this brief pathological summary. In those rather exceptional cases, in which the spermatorrhœa is the result of plethora and forced continence, it may only be necessary to impart to the patient correct views of the importance of the losses, which, influenced by current publications, he will be very apt to exaggerate. If his vessels are full, his bowels are constipated, and his digestion active, he will be benefited, if somewhat reduced by saline cathartics, by *liquor potassæ*, by a less liberal diet, by abundant exercise, and by diminishing the number of hours devoted to sleep. Many cases of so-called idiopathic spermatorrhœa occur in studious persons of sedentary habits, whose nervous system has been rendered unduly excitable by prolonged mental work with enfeebled digestive powers. These are relieved by mental rest, by some physical employment, and by attention to the state of the digestive organs.

Activity of the sexual system may be associated with this exalted state of the nervous system in studious persons; when, of course, the anaphrodisiac remedies will be required. It has happened to me to meet cases of this character in clergymen

who led a life of celibacy. A judicious employment of the hygienic means together with the medical, and especially, a candid statement of the real importance of the infirmity, will be followed by most satisfactory results.

A vast majority of the patients who present themselves for treatment, do not belong to either of the foregoing classes. They are those in whom seminal weakness has been induced by masturbation, or by prolonged excesses in venery. They have frequent nocturnal emissions. The reflex excitability of the cord is so much increased, that the feeblest irritation procures a prompt emission with little of the venereal orgasm, and the frequent discharges of nervous force affect the supply to all the organs—whence come palpitation, indigestion, constipation, irritable bladder, pain in the back, mental feebleness and debility. The peripheral irritation and the reflex excitability must be diminished. These important objects may be accomplished by means partly hygienical and partly medicinal.

The patient should cease his excesses, whatever they may have been, and avoid all sources of excitement, whether the reading improper publica-

tions, suggestive novels or works upon his own malady, or the society of women of easy virtue. The liberties between the sexes permitted by custom in many places and in certain circles of society without extending so far as the gratification of desire, are so very injurious to young men with "seminal weakness," that they should be absolutely interdicted. The mind of the patient should be freed, as far as possible, from any association with his disagreeable infirmity. Hence constant and agreeable employment, physical rather than mental, or an association of the two, is especially desirable. The Bromide of Potassium will powerfully contribute to the success of these measures. Twenty to forty grains may be given every night until sexual desire is entirely suspended. If decided anæmia exist, iron and quinia may be given during the day, conjoined with lupulin, should it be desirable to increase the anaphrodisia.

We have seen that dilatation of the inter-rachidian vessels probably exists in advanced cases. This view seems confirmed by the fact that the involuntary emissions occur much more certainly when the patient is lying on his back—a position favoring congestion of the cord. Hence man-

agement of the position in bed is not to be neglected. The patient should lie upon his side, and if unable to continue in this position when asleep, should adopt some mechanical appliances to compel it. Tying the hand to the bed-post so that the position of the back cannot readily be assumed may suffice in some instances. Or, Lallemand's contrivance may be adopted: this consists of a thin sheet of lead to which a piece of wood is fastened, attached by a girdle to the loins. Or, Mr. Acton's expedient, which is nothing more than a towel tied about the waist with a large knot behind. Or, lastly, the leather ring armed with metallic points, which will arouse the patient when erection occurs.

The principal remedial agent for inducing contraction of the inter-rachidian vessels is ergot. The drug should be fresh, or carefully prepared ergotin or fluid extract should be used. Cold to the spine, not too prolonged, or alternate hot and cold douches, may be usefully conjoined with the ergot. It should be remembered, however, that cold to the spine is a powerful aphrodisiac.

If the patient experience the tenacious discharge from the urethra, consisting of the secretion from

the prostate, Cowper's glands, and follicles of the mucous membrane, he will undoubtedly believe himself to have "diurnal pollutions," and will be correspondingly alarmed. If the discharge do not cease during the course of treatment just recommended, it will be necessary to adopt some special means to arrest it. We find that Mr. Hutchison* coincides with our view of the efficacy of the Bromide of Potassium in an irritable condition of the urethra. These special means consist in the local application in the manner already indicated of tanno-glycerine, of solutions of nitrate of silver, or the use of the *porte caustique*. We should not forget, however, that caustic applications are considered by Henry Thompson† as a cause of prostatitis. Indeed, he considers them a frequent cause; whereas, in his opinion, inordinate sexual indulgence can only have this effect, if there be a gonorrhœa already existing.

Our duty is not ended in a case of spermatorrhœa, with the production of a state of anaphrodisia and the curing of irritation in the

* London Hospital Reports, Op. Cit. Vol. II. p. 340.

† On Enlarged Prostate: Its Pathology and Treatment, London, 1858, p. 195.

urethra. We must restore the patient to the proper performance of his sexual functions, and this must be accomplished in such a way that he will not lapse into his former infirmity. The bromide of potassium and the ergot must be suspended, and tonics and special excitants must be employed. Extract of nux-vomica or strychnia with iron, is a useful combination under these circumstances. To control the action of the nux-vomica, and prevent too sudden stimulation of the cord, it is frequently desirable to combine belladonna with the strychnia and iron. However paradoxical such a combination may appear—seeing that strychnia and belladonna are in some respects physiologically antagonistic—it has been too frequently beneficial to be rejected on theoretical grounds. *Cimicifuga* and *cannabis indica* are also indicated, if there be any decided nervous phenomena present as a complication. Galvanism should not be neglected. It has seemed to me that static electricity was more beneficial than dynamic, in these cases, and in the form of the “electric bath,” the sparks being drawn from the spinal column and from the genitals.

During the whole period occupied by this treatment, certain accessories must not be disregarded. Simple but nutritious food must be taken; the supper should be light, and eaten four or five hours before retiring, and alcoholic stimulants should be avoided. The habitual use of tea, coffee, and tobacco, should be discouraged. Fluids and articles of food having a diuretic action should be sparingly used, since erections occur when the bladder becomes full. Laxatives are indicated if constipation exist, but not otherwise.

In that phase of spermatorrhœa which we have denominated the cerebral, in addition to the derangement of the sexual-spinal system there exists some form of cerebral disorder. If the sexual troubles are mere symptoms of mental derangement, the treatment of them is merged into that for insanity. If, on the other hand, the mental derangement is the result of seminal losses or abuse, the treatment of it becomes associated necessarily with that for the cause. The cases given in the extract from Dr. Williams's pamphlet belong to the first class; the typical cases presented under the head of the cerebral form, are instances of the second. The first are not amena-

ble to the action of anaphrodisiacs, whilst the second are. Usually the mental derangement has proceeded no further than hypochondria, melancholia, or trembling delirium (delusional insanity) corresponding to delirium tremens of alcoholismus. In all of the physical affections of spermatorrhœa, the bromide of potassium is very efficacious. Ergot should be administered in conjunction with it, and counter-irritants (firing, setons, blisters) should be applied to the nape of the neck, on Schroder Van Der Kolk's plan, and also recommended by Romberg.

The early recognition of mental disorders arising from abuse is very important. With the anaphrodisiacs—bromide of potassium, lupulin, and camphor—and moral agencies, should be conjoined the operation of circumcision. Physical constraint may also be resorted to, but this is a temporary expedient which more usually fails than succeeds. Division of the *vasa deferentia* in inveterate cases has been recommended, and we have seen it performed in an inveterate case. Nothing but a failure in the means already proposed, will justify the performance of this operation, as in its practical results it is equivalent to

castration. The operation is readily enough performed. The duct can be easily felt and separated from the rest of the spermatic cord, when it may be divided by the subcutaneous section.

In the spinal form of spermatorrhœa the treatment will be influenced by the condition of the cord. If the loss of power, the altered and referred sensations, the paraplegia, be merely functional derangements, or due to a "dynamic alteration," strychnia, cimicifuga, faradization, douches, hot and cold, to the spinal column, will be indicated. Bromide of potassium is hurtful in the paraplegia of sexual excess. It is, however, especially applicable to the treatment of the epilepsy and chorea of spermatorrhœa. The striking results obtained by Mr. Heckford, and my own observations, warrant me in strongly urging the operation of circumcision, in those convulsive disorders due to masturbation. In the typical cases of the spinal form narrated under that head, we found the extract of belladonna of signal advantage.

Treatment of Impotence.—The temporary impotence of spermatorrhœa requires time and familiarity with the object of desire. If it consist

of nothing more than such a degree of excitability of the reflex faculty, that intromission cannot be accomplished, or that the seminal discharge takes place after very imperfect coitus, then the treatment recommended for the genital form of spermatorrhœa may be pursued.

In the impotence dependent upon spermatorrhœa of long standing, hot and cold douches to the spine, galvanism or static electricity, and a properly conducted system of physical training and exercise, are the most appropriate measures. Special excitants may be employed in conjunction with these means: strychnia, allotropic phosphorus, cannabis indica, cantharides, etc.; but these remedies will not be successful unless the general health has been restored by proper hygiene and suitable hæmatinics. When the impotence depends upon "irritable testis," a judicious course of bromide of potassium should precede the use of the other measures. A favorable prognosis cannot frequently be given in these cases.

Marriage.—The practitioner is frequently desired to give an opinion as to the curative value of marriage. The question is sometimes a little

difficult to answer. The following rules appear to embody correct views :

1.—If the spermatorrhœa exist in the spinal or cerebral form, marriage is improper.

2.—Marriage is proper in the genital form, if the marriage rite may be consummated, although imperfectly.

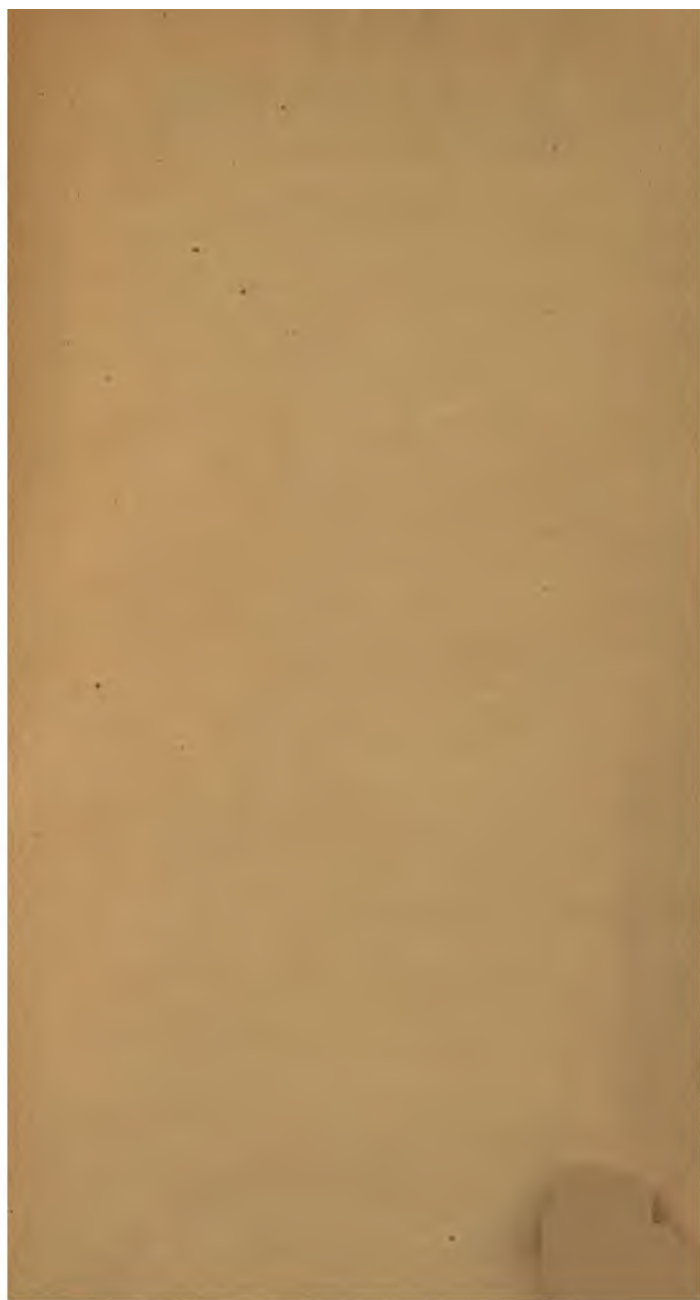
3.—Marriage should never be recommended as a curative means.

There can be no doubt that judicious sexual intercourse will prove curative in the genital phase of spermatorrhœa, provided that the reflex excitability of the cord be not so great as to prevent intromission of the male organ. Disappointment and unhappiness almost invariably result when marriage is resorted to as a remedy.

In the management of spermatorrhœa, the personal conduct of the physician becomes an element of success or failure. These patients are shy, gloomy, and morbidly sensitive. They have, frequently, been sadly duped. They are entitled to the sympathy, the considerate attention, and the inviolable confidence of the physician. When they make known to him their humiliating condition, their fears and unhappiness, he should not

add to their distresses by abrupt and unfeeling treatment. That physician will be most successful in the application of his therapeutic measures, who is most largely gifted with discretion and humanity.

FINIS.



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